

Revision nr.2 Dated 12/17/2018 Printed on 2/7/2019 Page n. 1 / 11 Replaced revision:1 (Dated 10/23/2015)

Safety Data Sheet

According to U.S.A. Federal Hazcom 2012

1. Product identifier	
Product name	RUST REMOVER
2. Relevant identified uses of the substance or m	
	·
Intended use	ANTIRUST
Identified Uses ADHESIVE SYSTEM/TREATMENT FOR STONE SECTOR	Industrial Professional Consumer
.3. Details of the supplier of the safety data sheet	
Name	Tenax Spa
Full address	Via I Maggio, 226
District and Country	37020 Volargne (VR)
	ltaly Tel. +39 045 6887593
	Fax +39 045 6862456
e-mail address of the competent person	
responsible for the Safety Data Sheet	msds@tenax.it
Product distribution by:	Tenax Usa
r foddet distribution by.	7606 Whitehall Executive Center Drive Suite 400, 28273 Charlotte NC, US
	Tel. 001 7045831173 - Fax 001 7045833166
	info@tenaxusa.com
	C C
.4. Emergency telephone number	
For urgent inquiries refer to	800.883300 (24h) Centro Antiveleni (Bergamo) 0 800 314 7900 (Turkey) only, or +90 0312 433 70 01 Toxicology Department and
	Poisons Centre
	+98 21 6419306 / +98 21 6405569 Poisons Information Centre (Tehran)
	+91 484 4008056 Poison Control Centre (South India)
	(011) 642 2417 / (011) 488 3108 Anti-Poison Centre (Johannesburg)
. Hazards identification	
1. Classification of the substance or mixture	
The product is classified as hazardous pursuant to t	the provisions set forth in OSHA Hazard Communication Standard (HCS) (29 CFR
1910.1200). The product thus requires a safety data	
Any additional information concerning the risks for h	nealth and/or the environment are given in sections 11 and 12 of this sheet.
Classification and Llozard Ctatamant	
Classification and Hazard Statement	Causes serious eve irritation
Eye irritation, category 2	Causes serious eye irritation. Causes skin irritation.
Eye irritation, category 2 Skin irritation, category 2	Causes serious eye irritation. Causes skin irritation.
Eye irritation, category 2	•
Eye irritation, category 2 Skin irritation, category 2	•
Eye irritation, category 2 Skin irritation, category 2	•
Eye irritation, category 2 Skin irritation, category 2	•
Eye irritation, category 2 Skin irritation, category 2	•

Hazard statements: H319

Causes serious eye irritation.



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. Hazards identification

H315	Causes skin irritation.
Precautionary statement	S:
Prevention:	
P280	Wear protective gloves / eye protection / face protection.
P264	Wash the hands thoroughly after handling.
Response:	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice / attention.
P337+P313	If eye irritation persists: Get medical advice / attention.
P302+P352	IF ON SKIN: wash with plenty of water /
P362+P364	Take off contaminated clothing and wash it before reuse.
Storage:	, and the second s
	-

Disposal:

2.2. Other hazards

Information not available

3. Composition/information on ingredients			
3.2. Mixtures			
Contains:			
Identificatior	Conc. %	Classification:	
SULPHAMI	C ACID		
CAS	5329-14-6 3	Eye irritation, category 2 H319, Skin irritation, category 2 H315, Hazardous to the aquatic environment, chronic toxicity, category 3 H412	
EC	226-218-8		
INDEX	016-026-00-0		
OXALIC AC	ID		
CAS	144-62-7 3	Acute toxicity, category 4 H302, Acute toxicity, category 4 H312	
EC	205-634-3		
INDEX	607-006-00-8		
PHOSPHOF			
CAS	7664-38-2 2	Skin corrosion, category 1B H314, Serious eye damage, category 1 H318	
EC	231-633-2		
INDEX	015-011-00-6		

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4. First-aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available



5. Fire-fighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray. UNSUITABLE EXTINGUISHING EQUIPMENT None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations. SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available



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8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

USA	NIOSH-REL	NIOSH publication No. 2005-149, 3th printing, 2007.
USA	OSHA-PEL	Occupational Exposure Limits - Limits for Air Contaminants TABLE Z-1-1910.1000.
USA	CAL/OSHA-PEL	California Division of Occupational Safety and Health (Cal-OSHA) Permissible Exposure Limits
		(PELs).

Information not available

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration. Personal protective equipment must comply with current regulations. HAND PROTECTION

Protect hands with category III work gloves (OSHA 29 CFR 1910.138).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability. The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear. Wash body with soap and water after removing protective clothing. EYE PROTECTION

Wear airtight protective goggles (OSHA 29 CFR 1910.133).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a NIOSH certified filter, whose class must be chosen according to the limit of use concentration (NIOSH 42 CFR 84, OSHA 29 CFR 1910.134). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus or external air-intake breathing apparatus. For a correct choice of respiratory protection device, see standard NIOSH 42 CFR 84, OSHA 29 CFR 1910.134.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Info
Appearance	liquid	
Colour	colourless-turbid	
Odour	characteristic	
Odour threshold	Not available	
рН	2,5-3	
Melting point / freezing point	Not available	
Initial boiling point	Not available	
Boiling range	Not available	
Flash point	> 93 °C	(199,4 °F)
Evaporation Rate	Not available	
Flammability of solids and gases	Not available	
Lower inflammability limit	Not available	
Upper inflammability limit	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Vapour pressure	Not available	
Vapour density	Not available	
Relative density	1.00	
Solubility	Not available	
Partition coefficient: n-octanol/water	Not available	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
Viscosity	Not available	



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9. Physical and chemical properties ...

Explosive properties Oxidising properties 9.2. Other information Not available Not available

Information not available

10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

OXALIC ACID

Decomposes at temperatures above 157°C/315°F.

SULPHAMIC ACID

Decomposes at 205°C/401°F.

PHOSPHORIC ACID

Decomposes at temperatures above 200°C/392°F.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

OXALIC ACID

May form explosive mixtures with: oxidising substances.Reacts violently developing heat on contact with: alkaline metals,ammonia,mercury,furfuryl alcohol,chlorates,hypochlorites.Risk of explosion on contact with: sodium chlorite,silver.

SULPHAMIC ACID

Risk of explosion on contact with: chlorine.Reacts violently with: nitrates,metal nitrites.

PHOSPHORIC ACID

Risk of explosion on contact with: nitromethane.May react dangerously with: alkalis, sodium borohydride.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

10.5. Incompatible materials

OXALIC ACID

Incompatible with: strong oxidants, metals, alkaline metals, furfurylic acid, chlorine compounds.

SULPHAMIC ACID

Incompatible with: chlorine,nitric acid,nitrates,sodium nitrite,potassium nitrites.

PHOSPHORIC ACID

Incompatible with: metals,strong alkalis,aldehydes,organic sulphides,peroxides.

10.6. Hazardous decomposition products

OXALIC ACID

May develop: carbon oxides.

SULPHAMIC ACID

May develop: sulphur oxides, nitric oxide.

PHOSPHORIC ACID

May develop: phosphoryl oxides.



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11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

PHOSPHORIC ACID LD50 (Oral) LD50 (Dermal) LC50 (Inhalation)	1530 mg/kg Rat 2740 mg/kg Rabbit > 0.85 mg/l/1h Rat
SULPHAMIC ACID LD50 (Oral)	1450 mg/kg Rat
OXALIC ACID LD50 (Oral)	375 mg/kg Rat
CORROSION / IRRITATION	

Causes skin irritation

SKIN

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE



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11. Toxicological information/

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

12. Ecological information

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil and waterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

12.1. Toxicity

Information not available

12.2. Persistence and degradability

PHOSPHORIC ACID	
Solubility in water Degradability: information not available	> 850000 mg/l
SULPHAMIC ACID	
Solubility in water Degradability: information not available	> 10000 mg/l
OXALIC ACID	
Solubility in water	> 10000 mg/l

12.3. Bioaccumulative potential

OXALIC ACID

Rapidly degradable

Partition coefficient: n-octanol/water

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

-1.7

12.6. Other adverse effects

Information not available

13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations. CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.



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14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal Regulations

TSCA: All components are listed on TSCA Inventory.

Clean Air Act Section 112(b): 7664-38-2 PHOSPHORIC ACID (Phosphorous compounds)

Clean Air Act Section 602 Class I Substances: No component(s) listed.

Clean Air Act Section 602 Class II Substances: No component(s) listed.

Clean Water Act – Priority Pollutants: No component(s) listed.

Clean Water Act – Toxic Pollutants: No component(s) listed.

DEA List I Chemicals (Precursor Chemicals): No component(s) listed.

DEA List II Chemicals (Essential Chemicals): No component(s) listed.

EPA List of Lists:



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15. Regulatory information / >>

313 Category Code: No component(s) listed.

EPCRA 302 EHS TPQ: No component(s) listed.

EPCRA 304 EHS RQ: No component(s) listed.

CERCLA RQ: 7664-38-2

PHOSPHORIC ACID (Phosphorous compounds)

EPCRA 313 TRI: No component(s) listed.

RCRA Code: No component(s) listed.

CAA 112 (r) RMP TQ: No component(s) listed.

State Regulations

Massachussetts:

144-62-7	OXALIC ACID
7664-38-2	PHOSPHORIC ACID (Phosphorous compounds)

Minnesota: 144-62-7

144-62-7	OXALIC ACID
7664-38-2	PHOSPHORIC ACID (Phosphorous compounds)

New Jersey:

144-62-7	OXALIC ACID
5329-14-6	SULPHAMIC ACID
7664-38-2	PHOSPHORIC ACID (Phosphorous compounds)

New York:

7664-38-2 PHOSPHORIC ACID (Phosphorous compounds)

Pennsylvania: 144-62-7

7664-38-2 PHOSPHORIC ACID (Phosphorous compounds)

OXALIC ACID

California:

 144-62-7
 OXALIC ACID

 7664-38-2
 PHOSPHORIC ACID (Phosphorous compounds)

Proposition 65:

This product does not contain any substances know to the State of California to cause cancer, reproductive harm or birth defects.

International Regulations

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012: None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Candadian WHMIS

Information not available

16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.



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16. Other information ... / :

H319 H315 H412	Causes serious eye irritation. Causes skin irritation. Harmful to aquatic life with long lasting effects.
- ADR: European	CODE: Emergency Planning and Community Right-to Know Act Section 313 Category Code Agreement concerning the carriage of Dangerous goods by Road TQ: Risk Management Plan Threshold Quantity (Clean Air Act Section 112®)
	Chemical Abstract Service Number
	concentration (required to induce a 50% effect)
- CERCLA RQ: Re - CLP: EC Regula	eportable Quantity (Comprehensive Environment Response, Compensation, and Liability Act) tion 1272/2008
- DEA: Drug Enfor	rcement Administration
- EmS: Emergency	
	nmental Protection Agency ency Planning and Community Right-to Know Act
	S TPQ: Extremely Hazardous Substance Threshold Planning Quantity (Section 302 Category Code)
	S RQ: Extremely Hazardous Substance Reportable Quantity (Section 304 Category Code)
	: Toxics Release Inventory (Section 313 Category Code) larmonized System of classification and labeling of chemicals
	national Air Transport Association Dangerous Goods Regulation
	ation Concentration 50%
	nal Maritime Code for dangerous goods al Maritime Organization
- LC50: Lethal Cor	•
- LD50: Lethal dos	
- OEL: Occupation - PEL: Predicted e	nal Exposure Level
	source Conservation and Recovery Act Code
	nded exposure limit
- RID: Regulation	concerning the international transport of dangerous goods by train
	concentration that should not be exceeded during any time of occupational exposure.
	bstances Control Act
	rt-term exposure limit Ihted average exposure limit
- VOC: Volatile org	- ·
- WHMIS: Workpla	ace Hazardous Materials Information System.
GENERAL BIBLIC)GRAPHY:
- GHS rev. 3	
- The Merck Index	
 Handling Chemic Niosh - Registry 	of Toxic Effects of Chemical Substances
- INRS - Fiche To	xicologique (toxicological sheet)
	Hygiene and Toxicology
- IN.I. Sax - Dange - ECHA website	erous properties of Industrial Materials-7, 1989 Edition
	S models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
6 NVCDD part 5	07
 6 NYCRR part 59 Cal/OSHA websi 	
	Drinking Water and Toxic Enforcement Act
- EPA website	potion Standard (HCS 2012)
- IARC website	cation Standard (HCS 2012)
- List Of Lists EPA	A: Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112® of the Clean Air Act
	105 CMR Department of public health 670.000: "Right to Know" ter 5206 Department of Labor and Industry Legardeus Substances, Employee "Bight to Know"
	ter 5206 Departemnt Of Labor and Industry Hazardous Substances, Employee "Right to Know". ker and Community Right to know Act N.J.S.A.
	ort on Carcinogens, 12th Edition.
- OSHA website	azardaua Sukatanga Liat, Chanter 202
- Pennsylvania, Ha	azardous Substance List, Chapter 323
Note for users:	enteined in the present sheet are based on our own knowledge on the data of the last version. He are reacted the
	ontained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the roughness of provided information according to each specific use of the product.
	ust not be regarded as a guarantee on any specific product property.



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16. Other information .../

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses. Provide appointed staff with adequate training on how to use chemical products.

Changes to previous review: The following sections were modified: 01 / 02 / 03 / 04 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 16.